

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Withdrawn) An isolated nucleic acid molecule consisting of a polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding a polypeptide comprising amino acids from 31 to 110 in SEQ ID NO:2 (Figure 1A);
- (b) a nucleotide sequence encoding a polypeptide comprising amino acids from 31 to 163 in SEQ ID NO:2 (Figure 1A);
- (c) a nucleotide sequence encoding a polypeptide comprising amino acids from 31 to 165 in SEQ ID NO:2; and
- (d) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), or (c);

and optionally, a heterologous polynucleotide sequence.

2-21. (Canceled)

22. (Withdrawn) An isolated polypeptide having an amino acid sequence at least 90% identical to a sequence selected from the group consisting of:

- (a) amino acids from 31 to 110 in SEQ ID NO:2 (Figure 1A);
- (b) amino acids from 31 to 163 in SEQ ID NO:2 (Figure 1A); and
- (c) amino acids from 31 to 165 in SEQ ID NO:2;

and optionally, a heterologous polypeptide sequence.

23. (Withdrawn) An isolated antibody that binds specifically to the polypeptide of claim 22.

24. (Canceled)

25. (Withdrawn) A method of treating an immunodeficiency or condition associated with an immunodeficiency, comprising administering an effective amount of the polypeptide of claim 22, to a patient in need thereof; wherein said immunodeficiency is selected from the group consisting of:

- (a) common variable immunodeficiency (CVID);
- (b) acquired immunodeficiency syndrome (AIDS);
- (c) severe combined immunodeficiency (SCID);
- (d) selective IgA deficiency;
- (e) hypogammaglobulinemia; and
- (f) Wiskott-Aldrich syndrome.

26. (Previously Presented) A method of treating an immunodeficiency or condition associated with an immunodeficiency, comprising administering an effective amount of the antibody of claim 23 to a patient in need thereof; wherein said immunodeficiency is selected from the group consisting of:

- (a) common variable immunodeficiency (CVID);
- (b) acquired immunodeficiency syndrome (AIDS);
- (c) severe combined immunodeficiency (SCID);
- (d) selective IgA deficiency;
- (e) hypogammaglobulinemia; and
- (f) Wiskott-Aldrich syndrome.

27. (Withdrawn) A method of diagnosing an immunodeficiency or condition associated with an immunodeficiency, comprising contacting the polypeptide of claim 22 with cells or bodily fluids from an individual, and assaying for binding to said polypeptide wherein said immunodeficiency is selected from the group consisting of:

- (a) common variable immunodeficiency (CVID);
- (b) acquired immunodeficiency syndrome (AIDS);
- (c) severe combined immunodeficiency (SCID);
- (d) selective IgA deficiency;
- (e) hypogammaglobulinemia; and
- (f) Wiskott-Aldrich syndrome.

28. (Withdrawn) A method of diagnosing an immunodeficiency or condition associated with an immunodeficiency, comprising contacting the antibody of claim 23 with cells or bodily fluids from an individual, and assaying for binding to said antibody; wherein said immunodeficiency is selected from the group consisting of:

- (a) common variable immunodeficiency (CVID);
- (b) acquired immunodeficiency syndrome (AIDS);
- (c) severe combined immunodeficiency (SCID);
- (d) selective IgA deficiency;
- (e) hypogammaglobulinemia; and
- (f) Wiskott-Aldrich syndrome.

29-30. (Canceled)

31. (Currently Amended) A method of treating an autoimmune disease or condition associated with an autoimmune disease comprising, administering an effective amount of ~~the~~ an anti-TR17 antibody or fragment thereof of claim 23, to a patient in need thereof; wherein said autoimmune disease is selected from the group consisting of:

- ~~(a) — rheumatoid arthritis;~~
- ~~(b) — systemic lupus erythmatosus erythematosus;~~
- (ea) multiple sclerosis;
- (~~db~~) Sjogren's syndrome; and
- ~~(e) — IgA nephropathy;~~
- ~~(f) — glomerulonephritis;~~
- (gc) diabetes mellitus; and
- ~~(h) — myasthenia gravis.~~

and wherein said anti-TR17 antibody or fragment thereof specifically binds a TR17 protein expressed on the surface of a cell wherein said TR17 protein is encoded by a polynucleotide that encodes amino acids 1 to 293 of SEQ ID NO:2.

32. (Canceled)

33. (Original) A method of increasing B cell proliferation, comprising administering an effective amount of the antibody of claim 23, to a patient in need thereof.

34. (Original) A method of increasing immunoglobulin production, comprising administering an effective amount of the antibody of claim 23, to a patient in need thereof.

35. (Canceled)

36. (Currently Amended) A method of inhibiting B cell proliferation, comprising administering an effective amount of ~~the~~ an anti-TR17 antibody or fragment thereof of claim 23, to a patient in need thereof, wherein said anti-TR17 antibody or fragment thereof specifically binds a TR17 protein expressed on the surface of a cell wherein said TR17 protein is encoded by a polynucleotide that encodes amino acids 1 to 293 of SEQ ID NO:2.

37. (Canceled)

38. (Currently Amended) A method of inhibiting immunoglobulin production, comprising administering an effective amount of ~~the~~ an anti-TR17 antibody or fragment thereof of claim 23, to a patient in need thereof, wherein said anti-TR17 antibody or fragment thereof specifically binds a TR17 protein expressed on the surface of a cell wherein said TR17 protein is encoded by a polynucleotide that encodes amino acids 1 to 293 of SEQ ID NO:2.

39. (Original) A method of killing a cell that expresses TR17 polypeptide on its cell surface, comprising contacting said cell with an antibody or portion thereof that specifically binds a polypeptide consisting of amino acid residues 1-293 of SEQ ID NO:2; wherein said antibody or portion thereof is conjugated to a toxin.

40. (Original) The method of claim 39 performed *in vitro*.

41. (Original) The method of claim 39 performed *in vivo*.

42. (Original) The method of claim 39 wherein said antibody or portion thereof specifically binds to a polypeptide consisting of amino acid residues 1-165 of SEQ ID NO:2.

43. (Original) The method of claim 39 wherein said antibody or portion thereof specifically binds to a polypeptide consisting of amino acid residues 31-165 of SEQ ID NO:2.

44. (Original) The method of claim 39 wherein said antibody or portion thereof specifically binds to a polypeptide consisting of amino acid residues 33-104 of SEQ ID NO:2.

45. (Original) The method of claim 39 wherein said antibody or portion thereof specifically binds to a polypeptide consisting of amino acid residues 33-66 of SEQ ID NO:2.

46. (Original) The method of claim 39 wherein said antibody or portion thereof specifically binds to a polypeptide consisting of amino acid residues 70-104 of SEQ ID NO:2.

47. (Original) The method of claim 39 wherein said antibody or portion thereof specifically binds to a polypeptide consisting of amino acid residues 31-110 of SEQ ID NO:2.

48. (Original) The method of claim 39 wherein the antibody or portion thereof is a monoclonal antibody.

49. (Original) The method of claim 39 wherein the antibody or portion thereof is a polyclonal antibody.

50. (Original) The method of claim 39 wherein the antibody or portion thereof is a chimeric antibody.

51. (Original) The method of claim 39 wherein the antibody or portion thereof is a humanized antibody.

52. (Original) The method of claim 39 wherein the antibody or portion thereof is a human antibody.

53. (Original) The method of claim 39 wherein the antibody or portion thereof is a single chain antibody.

54. (Original) The method of claim 39 wherein the antibody or portion thereof is a Fab fragment.

55. (Original) The method of claim 39 wherein said toxin is a radioisotope.

56. (Previously Presented) The method of claim 55 wherein said radioisotope is selected from the group consisting of:

- (a)  $^{125}\text{I}$ ;
- (b)  $^{121}\text{I}$ ;
- (c)  $^{123}\text{I}$ ;
- (d)  $^{131}\text{I}$ ;
- (e)  $^{111}\text{In}$ ;
- (f)  $^{112}\text{In}$ ;
- (g)  $^{113\text{m}}\text{In}$ ;
- (h)  $^{115\text{m}}\text{In}$ ;
- (i)  $^{99}\text{Tc}$ ; and
- (j)  $^{99\text{m}}\text{Tc}$ .

57. (Previously Presented) The method claim 39 wherein said toxin is selected from the group consisting of:

- (a) an anti-metabolite;
- (b) an alkylating agent;
- (c) an antibiotic;
- (d) an anti-mitotic agent;
- (e) an anthracycline; and
- (f) an apoptotic agent.

58. (Original) The method of claim 39 wherein said cell is an immune system cell.

59. (Original) The method of claim 58 wherein said immune system cell is a lymphocyte.

60. (Original) The method of claim 59 wherein said lymphocyte is a B cell.

61. (Original) The method of claim 60 wherein said B cell is leukemic.

62. (Original) The method of claim 59 wherein said lymphocyte is a T cell.

63. (Original) The method of claim 62 wherein said T cell is leukemic.

64. (New) The method of claim 31 wherein said antibody or fragment thereof is a monoclonal antibody.

65. (New) The method of claim 31 wherein said antibody or fragment thereof is a polyclonal antibody.



66. (New) The antibody or fragment thereof of claim 31 wherein said antibody or fragment thereof is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a human antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

67. (New) The method of claim 31 wherein said antibody or fragment thereof is conjugated to a cytotoxin.

68. (New) The method of claim 36 wherein said antibody or fragment thereof is a monoclonal antibody.

69. (New) The method of claim 36 wherein said antibody or fragment thereof is a polyclonal antibody.

70. (New) The antibody or fragment thereof of claim 36 wherein said antibody or fragment thereof is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a human antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

71. (New) The method of claim 36 wherein said antibody or fragment thereof is conjugated to a cytotoxin.

72. (New) The method of claim 38 wherein said antibody or fragment thereof is a monoclonal antibody.

73. (New) The method of claim 38 wherein said antibody or fragment thereof is a polyclonal antibody.

74. (New) The antibody or fragment thereof of claim 38 wherein said antibody or fragment thereof is selected from the group consisting of:

- (a) a chimeric antibody;
- (b) a humanized antibody;
- (c) a human antibody;
- (d) a single chain antibody; and
- (e) a Fab fragment.

75. (New) The method of claim 38 wherein said antibody or fragment thereof is conjugated to a cytotoxin.